

CLAIMS

What is claimed as being new and desired to be protected by Letters Patent of the United States is as follows:

1. A track drive undercarriage device attached to a chassis of a heavy construction vehicle and operationally connected to a transmission and drive shaft of the construction vehicle, said device comprising:
 - a pair of support braces attached to the construction vehicle;
 - a base plate attached to said support braces;
 - four shock absorbers attached to said base plate;
 - 10 four axles attached to said four shock absorbers, each axle having a distal end and a proximate end, the proximate end of each axle is attached to one of said four shock absorbers;
 - a pair of torque bars attached to said four axles, each torque bar having two opposite ends, each opposite end of each torque bar is attached to the distal end of one of said four axles; and
 - 15 four spindles attached to said four axles, each spindle is attached to the distal end of one of said four axles.
2. The device of Claim 1 further comprising four wheel bearings attached to said four spindles, each wheel bearing is attached to one of said four spindles.
3. The device of Claim 2 further comprising four cogwheels attached to said four wheel bearings wherein each cogwheel is attached to one wheel bearing of said four wheel bearings.
- 20 4. The device of Claim 1 further comprising a pair of drive wheels attached to the drive shaft of the construction vehicle, each drive wheel is attached to an opposing end of the drive shaft whereby each drive wheel is operatively attached to the transmission of the construction vehicle.
5. The device of Claim 3 further comprising a pair of drive wheels attached to the drive shaft of the construction vehicle, each drive wheel is attached to an opposing end of the drive shaft whereby each drive wheel is operatively attached to the transmission of the construction vehicle.
- 25 6. The device of Claim 5 further comprising a pair of endless belts operatively attached around said cogwheels and said drive wheels.
7. The device of Claim 1 wherein each shock absorber comprising:
 - 30 a U-brace attached to said base plate;
 - a horizontal cross bar attached to said U-brace;
 - a pair of horizontal springs attached to said U-brace and attached to said horizontal cross

bar; and

a vertical spring attached to said U-brace and attached to said U-brace, wherein the proximate end of each axle is attached to said horizontal cross bar, said pair of horizontal springs and said vertical spring of one of said four shock absorbers.

- 5 8. The device of Claim 1 wherein each torque bar comprising a compression shock system attached to a middle portion of each torque bar.
9. The device of Claim 8 wherein said compression shock system comprises a housing assembly and a compression spring attached to said housing assembly.
10. The device of Claim 1 wherein the construction vehicle is a bulldozer.
11. The device of Claim 1 wherein the construction vehicle is a tractor.
12. The device of Claim 1 wherein the construction vehicle is a backhoe.
13. The device of Claim 1 wherein the construction vehicle is a military tank.
14. The device of Claim 1 wherein the construction vehicle is a military troop carrier.
15. A kit for a track drive undercarriage device for attachment to a chassis of a heavy construction vehicle and operationally connectable to a transmission and drive shaft of the construction vehicle, said kit comprising:
a pair of support braces attachable to the construction vehicle;
a base plate attached to said support braces;
four shock absorbers attached to said base plate;
20 four axles attached to said four shock absorbers, each axle having a distal end and a proximate end, the proximate end of each axle is attached to one of each shock absorber;
a pair of torque bars attached to said four axles, each torque bar having two opposite ends, each opposite end of each torque bar is attached to the distal end of each axle; and
four spindles attached to said four axles, each spindle is attached to the distal end of each axle.
- 25 16. The kit of Claim 15 further comprising four wheel bearings attachable to said four spindles, each wheel bearing is attachable to one of said four spindles.
17. The kit of Claim 16 further comprising four cogwheels, each cogwheel is individually attachable to separate wheel bearings.
18. The kit of Claim 17 further comprising a pair of drive wheels attachable to the drive shaft of the construction vehicle, each drive wheel is attachable to opposing ends of the drive shaft whereby each drive wheel is operatively attachable to the transmission of the construction

vehicle.

19. The kit of Claim 18 further comprising two endless belts operatively attachable around said cogwheels and said drive wheels.

20. A method of using a kit for attaching a track drive undercarriage device to a chassis of a heavy construction vehicle, said method comprising the steps of:
5 obtaining the kit comprising:

a pair of support braces attachable to the construction vehicle;

a base plate attached to said support braces;

four shock absorbers attached to said base plate;

10 four axles attached to said four shock absorbers, each axle having a distal end and a proximate end, the proximate end of each axle is attached to one of each shock absorber; a pair of torque bars attached to said four axles, each torque bar having two opposite ends, each opposite end of each torque bar is attached to the distal end of each axle; and four spindles attached to said four axles, each spindle is attached to the distal end of each 15 axle.

affixing the base plate to the chassis of the construction vehicle;

acquiring four wheel bearings attachable to the four spindles;

adjoining operationally each wheel bearing to each spindle;

securing four cogwheels;

20 connecting operationally each cogwheel to each wheel bearing;

receiving a pair of drive wheels;

joining operationally each drive wheel to the drive shaft of the construction vehicle;

procuring a pair of endless belts; and

wrapping operationally the endless belts around the cogwheels and the drive wheels.